

European Respiratory Society Annual Congress 2013

Abstract Number: 4979
Publication Number: P4027

Abstract Group: 4.2. Sleep and Control of Breathing

Keyword 1: Hypoxia **Keyword 2:** Lung cancer / Oncology **Keyword 3:** Sleep studies

Title: OSAS and cancer: Is there a relation?

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Body: INTRODUCTION: Recently there has been a hypothesis that intermittent hypoxia, like the one produced by obstructive sleep apnea syndrome(OSAS) can promote the appearance of cancer(CA) or accelerate the metastasis growth. The objective of our work was to observe if the incidence of CA in the patients diagnosed of OSAS in our sleep unit between 2007 and 2008. METHODS: We took the patients on which there were performed a polysomnography(PSG) or polygraphy(PG) in patients with suspected OSAS; we excluded those patients with CA before the diagnose of OSAS; and observe its incidence in this 4 year follow up. We analyze the AHI, the oxygen desaturation index(ODI), the time spent below 90%(T<90%), as well as the sex, gender, and the type of cancer produced in this patients. RESULTS We included 561 patients, 82% males, mean age was 56.2 years. There were performed 51,6% PG and 48,8% PSG to diagnose OSAS in 88,9%; 44,5%severe, 23,1%moderate and 21,1%mild by IAH criteria. Thirty one (5,9%) were diagnosed with CA(28 males), with mean age of 60,9 years.

Cases of Cancer

ODI	Cases	T<90%
<15	6(19,3%)	1
15-29	13(41,9%)	14,5
>30	12(38,7%)	47,6

n=31

Comparing the 2 groups(ODI <15 and ODI >15) using Chi² the result was 4,87 been this difference statically significant (p<0,05). The different types of CA were, gastroenterologic 9(29%), urologic 8(25,8%), pulmonary 4(12,9%), otorhinolaryngology 1(3,2%), thyroid 2(6,4%), other origins 7(22,5%). The tobacco exposure in the CA group:

Tobacco Exposure

ODI	Smoker	Ex smoker	Non smoker
<15	2	2	2
14-29	4	7	2
>30	4	7	1

n=31

CONCLUSIONS: 1. Cancer incidence is greater in the patients with an ODI over 15, which measures hypoxia-normoxia periods. 2. We cannot determinate if this association is real or could be influenced by other exposures.